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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte JUN SAITO, HIDEICHI NITTA,
HIROYUKI YAMASHITA, and YUSHI SAKATA

Appeal 2009-000475
Application 10/049,995
Technology Center 1700

Decided: December 16, 2009

Before BRADLEY R. GARRIS, CHUNG K. PAK, and
PETER F. KRATZ, *Administrative Patent Judges*.

GARRIS, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants appeal under 35 U.S.C. § 134 from the Examiner's decision rejecting claims 1-7, 9-13, and 15-19. We have jurisdiction under 35 U.S.C. § 6.

We AFFIRM.

Appellants claim a process for preparing a high-bulk density detergent composition comprising the steps of (A) blending a liquid acid precursor of an anionic surfactant with a water-soluble, alkali inorganic substance, "and beginning step (B) after a point of initiating formation of coarse grains in the neutralization mixture obtained during the course of neutralizing the liquid acid precursor," and (B) adding an inorganic powder such as an alkali metal aluminosilicate and a liquid binder to the neutralization mixture obtained in step (A) and mixing the resulting mixture (independent claims 1, 10).

Appellants also claim (i) the timing for initiating addition of the inorganic powder or alkali metal aluminosilicate (dependent claims 2, 5, 11), (ii) maintaining 5% by weight or less of alkali metal aluminosilicate in step (A) (claims 6, 12), and (iii) adding the inorganic powder or alkali metal aluminosilicate both before and after addition of the liquid binder (dependent claims 18, 19).

Representative claims 1, 2, 6, 10, and 18 read as follows:

1. A process for preparing a high-bulk density detergent composition having a bulk density of 650 g/L or more, comprising the steps of:

(A) blending a liquid acid precursor of an anionic surfactant with a water-soluble, alkali inorganic substance in an amount equal to or exceeding an amount necessary for neutralizing the liquid acid precursor, in a substantial absence of an alkali metal aluminosilicate, and beginning step (B) after a point of initiating formation of coarse grains in the neutralization mixture obtained during the course of neutralizing the liquid acid precursor; and

(B) adding an inorganic powder and a liquid binder to the neutralization mixture obtained in step (A) and mixing a resulting mixture, wherein the inorganic powder is added to the neutralization mixture prior to the addition of the liquid binder to the neutralization mixture, and then the inorganic powder is added to the neutralization mixture after the addition of

the liquid binder to the neutralization mixture; and wherein the inorganic powder is added to the neutralization mixture in step (B) in an amount of 8 to 50% by weight of the high-bulk density detergent composition, which is the final product.

2. The process according to claim 1, wherein the addition of the inorganic powder is initiated in step (B) at any time between a point when the liquid acid precursor of an anionic surfactant is added in an amount exceeding a weight ratio of 0.25 to the water-soluble, alkali inorganic substance and a point up to 5 minutes from termination of addition of an entire amount of the liquid acid precursor.

6. The process according to claim 1 or 2, wherein the substantial absence of alkali metal aluminosilicate recited in Step (A) is an amount of 5% by weight or less.

10. A process for preparing a high-bulk density detergent composition having a bulk density of 650 g/L or more, comprising the steps of:

(a) blending a liquid acid precursor of an anionic surfactant with a water-soluble, alkali inorganic substance in an amount equal to or exceeding an amount necessary for neutralizing the liquid acid precursor, in a substantial absence of an alkali metal aluminosilicate, and beginning step (B) after a point of initiating formation of coarse grains in the neutralization mixture obtained during the course of neutralizing the liquid acid precursor; and

(b) adding an alkali metal aluminosilicate and a liquid binder to the neutralization mixture obtained in step (a) and mixing a resulting mixture, wherein the alkali metal aluminosilicate is added to the neutralization mixture prior to the addition of the liquid binder to the neutralization mixture, and then the alkali metal aluminosilicate is added to the neutralization mixture after the addition of the liquid binder to the neutralization mixture; and wherein the alkali metal aluminosilicate is added to the neutralization mixture in step (B) in an amount of 8 to 50% by weight of the high-bulk density detergent composition, which is the final product.

18. The process according to claim 1, wherein multiple additions of the inorganic powder occur, with at least one of the multiple additions being prior to the addition of the liquid binder to the neutralization mixture and at least one of the multiple additions being after the addition of the liquid binder to the neutralization mixture.

The references set forth below are relied upon by the Examiner as evidence of obviousness:

Mort III (Mort)	6,794,354 B1	Sep. 21, 2004
Nitta	EPA 0 936,269 A1	Aug. 18, 1999

The Examiner rejects all appealed claims under 35 U.S.C. § 103(a) as being unpatentable over either Nitta or Mort.

The issue concerning representative independent claims 1 and 10 is whether Examiner error has been shown by Appellants' argument that the claimed process distinguishes over Nitta and Mort respectively via the claim recitation "and beginning step (B) after a point of initiating formation of coarse grains in the neutralization mixture obtained during the course of neutralizing the liquid acid precursor."

The issue concerning representative dependent claims 2, 6, and 18 is whether Appellants have shown error in the Examiner's determination that the limitations of these claims do not patentably distinguish over Nitta and Mort.

We adopt as our own the findings of fact expressed by the Examiner in the Answer with regard to the argued claims on appeal.

Appellants argue that the teaching in Nitta and Mort of adding zeolite (i.e., the claim 1 inorganic powder and the claim 10 alkali metal aluminosilicate) after neutralization fails to satisfy the independent claim limitation

"and beginning step (B) after a point of initiating formation of coarse grains in the neutralization mixture obtained during the course of neutralizing the liquid acid precursor" (claims 1, 10) (App. Br. 17, 21-22; Reply Br. 3-4). According to Appellants, "[t]he limitation of claims 1 and 10 requires the addition of [an inorganic powder or] an alkali metal aluminosilicate *during the neutralization step*" (Reply Br.7).

We cannot agree.

The independent claim limitation under review requires "beginning step (B) after a point of initiating formation of coarse grains" and further specifies that this coarse grain formation occurs "in the neutralization mixture obtained during the course of neutralizing the liquid acid precursor" (claims 1, 10). However, contrary to Appellants' argument, nothing in this claim limitation requires that the beginning of step (B) must occur during the neutralization step (i.e., the neutralizing of step (A)). The plain language of claim 1 requires "beginning step (B) after a point of initiating formation of coarse grains," and Appellants have not contested the Examiner's finding that both Nitta and Mort satisfy this requirement. We perceive no merit in Appellants' argument that the independent claims also require step (B) to begin during the neutralization step.

For the above stated reasons, Appellants have failed to show that the independent claim limitation under review distinguishes over either Nitta or Mort.

Concerning representative dependent claim 2 as well as corresponding claims 5 and 11, Appellants argue that Nitta and Mort are "silent with respect to the limitations of these claims (App. Br. 18, 22). Similarly, with regard to dependent claims 6 and 12, Appellants argue that Nitta "is silent

regarding the desirability of maintaining a low content of alkali metal aluminosilicate during step (A)" (App. Br. 19). However, these unembellished arguments fail to explain why these claim limitations are thought to be patentable over the applied prior art. For example, Appellants state that Nitta is silent regarding the desirability of maintaining 5% by weight or less of alkali metal aluminosilicate in step (A) as required by claims 6 and 12. Significantly, this statement fails to address the fact that Nitta's corresponding step in Example 1, which is specifically cited by the Examiner (Ans. ¶¶ bridging pages 3-4), contains no alkali metal aluminosilicate.

As for representative dependent claim 18 and corresponding claim 19, Appellants argue that "[t]he Examiner's [obviousness] position is without basis for the reason that it is based on mere supposition and speculation" (App. Br. 19, 23).

This argument is unpersuasive.

The Examiner concludes that it would have been obvious to add the zeolite (i.e., the claim 18 inorganic powder and the claim 19 alkali metal aluminosilicate) of Nitta or Mort both before and after addition of the liquid binder as required by dependent claims 18 and 19 (Ans. ¶¶ bridging pages 3-4, 5). This obviousness conclusion is supported by technical reasoning as well as uncontested fact (*Id.* at 3-9). For example, Appellants do not dispute the Examiner's findings that Nitta discloses adding substances such as alkali metal aluminosilicates (i.e., zeolites) before addition of liquid components (¶ [0062]) and further discloses adding zeolite after addition of an aqueous copolymer (i.e., liquid binder) (Example 1, ¶ [0106]) (Ans. ¶¶ bridging pages 3-4, 6, last ¶). Appellants do not even acknowledge these disclosures of

Nitta much less explain why they would not have suggested adding zeolite (i.e., the claim 18 inorganic powder or the claim 19 alkali metal aluminosilicate) prior to as well as after addition of the liquid binder as required by the dependent claims in question.

In light of the foregoing, Appellants have shown no error in the Examiner's rejection of the separately argued dependent claims on appeal.

As a final matter for consideration, Appellants state that their nonobviousness conclusion "is buttressed or supported by the unexpected and advantageous properties that are possessed by the high-density detergents (*e.g.*, *Example 1 in the instant specification*) that can be produced with the instant inventive processes" (App. Br. 25). As support for this statement, Appellants compare examples in their Specification with examples in Nitta (though not Mort) (App. Br. 15-17; Reply Br. 5-6). However, we agree with the Examiner (Ans. 9) that Appellants' assertion of unexpected results is not supported by evidence, namely, evidence that compares the respective processes of both Nitta and Mort with inventive processes which are commensurate in scope with the independent claims as broadly interpreted above. In this latter regard, we emphasize that Appellants' unexpected results assertion is based on their incorrect (as explained above) belief that the appealed claims require the step (B) addition of alkali metal aluminosilicate during (as opposed to after) the neutralization step (*see* App. Br. 24, 1st and 2nd paras.). On this record, therefore, Appellants have failed to carry their burden of showing results that are unexpected when compared to each of the applied references and that are commensurate in scope with the appealed independent claims.

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For the reasons set forth above and in the Answer, we sustain the Examiner's § 103 rejections of all appealed claims as being unpatentable over either Nitta or Mort.

The decision of the Examiner is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED

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